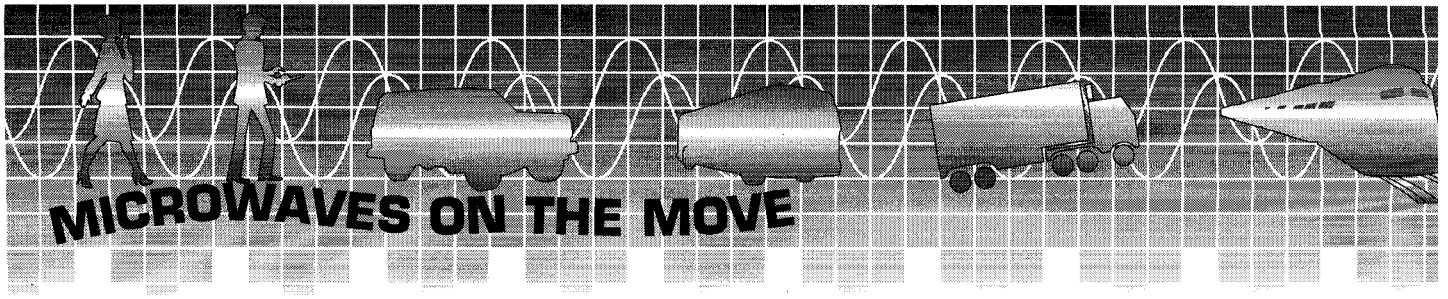


1995 IEEE MTT-S Exhibition Guide

The following list is complete as of press time, but may not include all companies.

Accumet Engineering Corp. **1127**
Hudson, MA

Advance Reproductions Corporation **418**
N. Andover, MA

C. Losano

Computer-aided drafting, and complete photo-tooling and photolithography.

Advanced Switch Technology **1422**
Pointe-Claire, Quebec, Ontario, Canada

G. Cappelli

Advanced Technology Group Inc. **509**
Rockaway, NJ

L.Y. Tao, F. McIver-Hanus, E. Maier, R. Jonassen

Glass-to-metal seal packages, including flat packs, dual in-line headers, feedthroughs, unibody and machined, microwave, TO, power, fiber-optic and other custom-designed hybrid microcircuit packages.

AEG Corp. **1421**
Basking Ridge, NJ

A.J. Tuck Company **1305**
Brookfield, CT

A. Tuck, D. Tuck, L. Hunt

Custom-manufactured components by electroforming, including waveguide transition, filters, cavities, polarizers, OMTs, horns, miniature double ridge and mm-waveguide components; air dielectric coaxial cables; and specialty engineering applications.

AEL Industries Inc. **918**
Lansdale, PA

C. Snow, B. Shillady, J. Klepchick, T. Musto, J. Schuchardt

Spiral, horn, log periodic and radome antennas, custom front-ends, translators, converters, subassemblies, MICs, log amplifiers, IF components, SDIAs, monolithic and hybrid.

Alan Industries Inc. **529**
Columbus, Indiana

B. Kennedy, C. Shofner, W. Kennedy, S. Kennedy

Passive components for the wireless/satellite communications, including programmable, rotary and continuously variable attenuators, DC blocks, matching pads, directional couplers, terminations, return loss bridges and coaxial switches.

Aerowave Inc. **1329**
Medford, MA

Alcatel Network Systems–
Ferrocom Ferrite Products **1124**
San Jose, CA

M. Kyser, M. Swift, T. Nguyen, L. Hogue

Microwave isolators and circulators in select frequency bands from 132 MHz to 40 GHz, and standard an custom configurations in coaxial, drop-in waveguide and isoadapter.

Alessi Inc **1323**
Irvine, CA

AlliedSignal Inc.,
Microwave Circuit Materials **1112**
La Crosse, WI

B. Beumer, R. Bishop, C. Carvey, J. Hamilton, J. Howe, B. Noonan, R. Trine

PTFE/woven glass laminates for low loss, high frequency microwave applications.

Alpha Industries Inc. **732**
Woburn, MA

R. Langlaio, J.P. Gillard, M. Comerford

Microwave products for wireless commercial and military applications from RF through millimeter waves, including a broad array of semiconductor devices, components and subsystems.

American Technical Ceramics **1011**
Huntington Station, NY

K. Levine

RF/microwave/mm-wave capacitors, including ceramic and porcelain MLCs, high voltage capacitors, ceramic single layer capacitors (SLCs), and custom products and assemblies; custom metalization and patterned substrates for a variety of hybrid circuit requirements; and low cost general purpose ceramic MLCs for high volume surface mount applications.

Amphenol RF/Microwave Division
Danbury, CT

V. Borase, W. Strobel, J. Germany, N. Buonanno, W. Harris

RF/microwave coaxial connectors and cable assemblies.

Amplica Inc. **1105**
Newbury Park, CA

Amplidyne Inc. **524**
Belle Mead, NJ

T. Bains

800 MHz to 14.5 GHz, 1 to 150 W cellular and telecom amplifiers that are useful for low noise or power amplification in communication systems.

Amplifier Research **501**
Souderton, PA

D. Shepherd, E. Shepherd, L. Pokorny

New microwave amplifiers in addition to existing low, medium and high power broadband amplifiers, antennas and accessories.

Anadigics Inc. **615**
Warren, NJ

C. Armour, R. Bayruns, T. DeNigris, R. VonGerichten, C. Huang, J. Patel, R Rosenzweig, P. Wallace, J. Miller

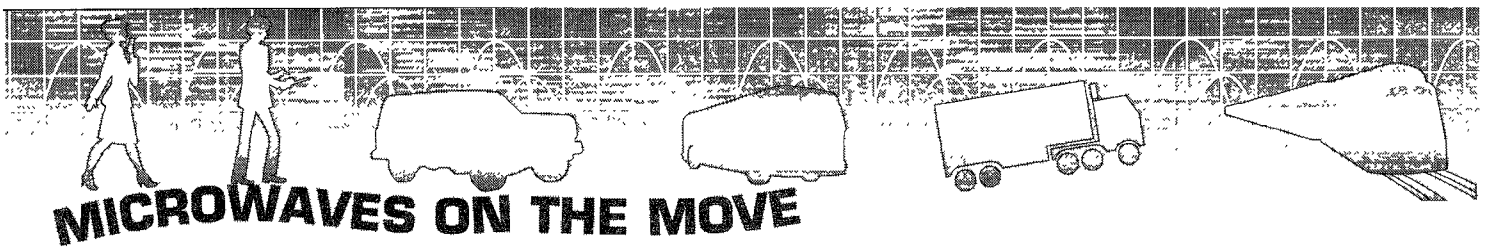
GaAs integrated circuits for RF, microwave and fiber-optic transceiver applications, including DBS, CATV, HDTV, SONET, PCN, LAN and wireless, in the consumer and commercial fields.

Anaren Microwave Inc. **429**
E. Syracuse, NY

Andrew Corporation **1126**
Orland Park, IL

T. Terry

Heliax® coaxial cables and custom cable assemblies.



Anritsu Wiltron **1133**
Morgan Hill, CA

K. Harvey, E. Daw, D. Mulder, T. Kilbourne, J. Hamilton

Optical, PCM, RF/microwave and telecomm test and measurement products focusing on digital mobile RF communications, OTDRs and SONET/ATM, including vector network analyzers, swept frequency synthesizers, scalar network analyzers, digital mobile radio test systems, counters, power meters and portable OTDRs.

Apollo Microwaves Ltd.
Dorval, Quebec, Canada

Applied Microwave & Wireless 746
East Orleans, MA

J. White, E. White, S. Spencer

A quarterly magazine written for professionals in the RF, microwave and optical fields, and emphasizing wireless design and development with articles and advertising span the 1 MHz to light frequencies.

Applied Systems Engineering Inc. **507**
Forth Worth, TX

B. Jostrand

Pulse and CW microwave amplifiers/transmitters and subsystems, klystrons, CFAs, magnetrons, cavity oscillators and amplifiers, satellite communications, EMC and radar.

Arlon **1043**
Bear, DE

M. Carlson, D. Watt, C. Gules, T. Welo, K. Husted, R. LeSage, T. Tschida

PTFE based substrates, featuring AR1000, for wireless, communication and military applications with dielectric constants of 2.17 to 1.08, woven and non-woven with sheet sizes up to 36" × 48".

Artech House Inc. **608**
Norwood, MA

W. Bazzy, M. Walsh

Technical books and software on microwave applications and techniques.

Assemblies Inc. **1325**
Warner Robins, GA

J. Daniel, Jr., J. Tinney, Jr., J. Daniel, III, N. Daniel

Flexible and semi-rigid coaxial cable assemblies and precision coaxial connectors.

Astrolab Inc. **845**
Warren, NJ

S. Toma, J. Toma, M. Ceres

Commercial and military coaxial connectors, cable assemblies, adaptors and other passive components.

Atlantic Microwave Corp. **1420**
Bolton, MA

ATN Microwave, Inc. **1134**
Billerica, MA

M. Fennelly, V. Zohrabian, C. Woodin, D. Wandrei

Noise parameter and load pull device characterization systems; and ECal electronic calibration technology.

Avantel Communications Ltd. **624**
Hyerabad, India

Balo Hermetics Co. **1314**
Butler, NJ

E. Rapoza, M. O'Keefe, R. Doherty, K. Kelly

Hi-rel packages for microwave applications, including channelized switch packages, standard RF configurations and surface mount types, and glass-to-metal and ceramic-to metal construction; package design and engineering services, and in-house machining, and sealing and plating capabilities in accordance with MIL specs.

Belden Wire & Cable Company **848**
Richmond, IN

K. Coates, S. Lampen, M. VanDerBurgt

RF/microwave coax and hand formable, Conformable® coaxial cable.

Boonton Electronics Corporation **634**
Parsippany, NJ

G. Kohli

Electronic test and measuring equipment, including RF and microwave, CW power meters, peak power meters and analyzers, along with RF voltmeters, modulation analyzers, audio analyzers and impedance measuring instruments, used for testing terrestrial and satellite wireless communication, radar, telemetry and various other RF and microwave systems.

Brush Wellman Inc. **821**
Cleveland, OH

S. Kazarian, E. Lewis

Ceramic-based heat sinks, thin- and thick-film substrates and copper-bonded ceramic packages.

Buckbee-Mears **1012**
St. Paul, MN

P, Beddles, F. Grimm, P. Meagner

Large-sized microwave PCBs used as printed circuit antennas, radomes and RF shields for medical imaging equipment; stripline and microstrip circuits up to 120" long; and photo-etched metal parts.

California Eastern Laboratories **1019**
Santa Clara, CA

R. Tyson, L. Lea, J. Barry, S. Morris, D. Krudop, M. Navarre

RF and microwave semiconductors, including small signal and power bipolars, small signal and power GaAs FETs, silicon and GaAs MMICs and multichip hybrids.

Cascade Microtech **1027**
Beaverton, OR

Celeritek **1338**
San Jose, CA

Cernex Inc. **342**
Cupertino, CA

State-of-the-art thin-film hybrid microwave amplifier and subassemblies; and ultra-low noise and very high power broadband and narrowband amplifiers from 0.1 to 40 GHz, limiting amplifiers, active frequency multipliers and gain modules.

Chapman & Hall **1424**
New York, NY

Cirqon Technologies Corporation **527**
Gurnee, IL

C. Wolf, J. McConnell

Pure copper circuitry on 0.001" to 0.004" with and with out thick-film resistors; copper-filled vias for enhanced thermal and electrical performance; 0.002"/0.002" copper trace width and spacing in 0.001" thick copper; and cost effective prototyping through high volume.

Coleman Microwave Co. **519**
Edinburg, VA

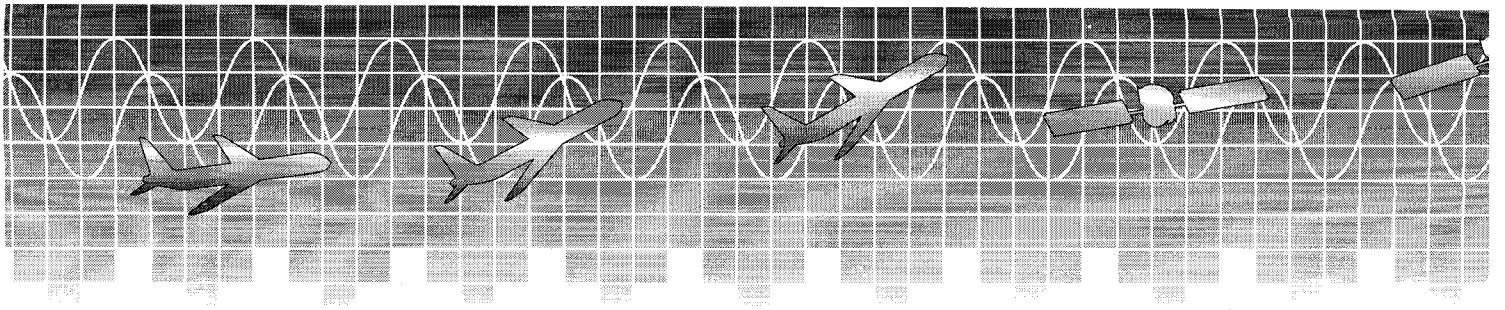
D. Braithwaite, J. Coleman, K. Coleman, V. Jordan

Tunable and fixed-tuned microwave filters; diplexers; triplexers with direct frequency tape and LED readouts; IEEE-bus compatible programmable filters with accuracy of ±1 MHz in coaxial and waveguide designs; and 0.15 to 26 GHz rigid and flexible waveguide assemblies, bends, twists, straight sections, terminations and coaxial adapters.

Communictions Techniques Inc. **1100**
Whippany, NJ

I. Crossley, B. Badami

Microwave signal generation components and subsystems for wireless applications, such as phase-locked and free-running DROs, CROs, VCOs and cavity oscillators, microwave frequency synthesizers for VSAT, SATCOM and subsystems, including VXI synthesizers, and up- and downconverters for cellular and WLAN test applications.



Compac Development Corp. **743**
Holbrook, NY

Compact Software
Paterson, NJ

T. Westerhoff

Integrated CAE/CAD solutions for RF, microwave and lightwave design available for PC/Windows, Sun SPARCstations and HP workstations; capabilities include schematic capture, linear and nonlinear frequency-domain simulations, physical layout, system simulation, time-domain simulation and full-wave electromagnetic simulation.

Compex **635**
Medford, NJ

Component Distributors **1426**
Plano, TX

Component General Inc. **808**
Odessa, FL

L. Cook

Power based mounted components, including resistors, terminations, attenuators; SMA terminations; conduction cooled loads; power chips, including resistors, terminations, attenuators coaxial components, including rods, discs, T-pads; and flange terminations.

Comstron, a division of Aeroflex **1132**
Planiview, NY

Conductus Inc. **344**
Sunnyvale, CA

L. Crowley

High performance transceiver filters (including A-B filters), resonators, delay lines and subsystems for cellular base station; devices that exhibit low insertion loss, high Qs and small fractional bandwidths using high temperature, thin-film superconductors; and subsystem packaging that includes all necessary RF devices with a highly reliable refrigerator in an industry-standard equipment rack.

Connecting Devices Inc. **500**
Long Beach, CA

W. Carpenter, M. Peeran, J. O'Dell

SSMA, AMA, N, TNC, 2.4 mm, 2.9 mm, 3.5 mm, radius right angle 18 to 40 GHz, field replaceable to 26 GHz , in and between series, hermetic, phase adjustable and special microwave connectors; cable assemblies, custom semi-rigid and flexible, handi-form® reformable; and all new SMP push-on blind mate connectors.

Continental Microwave & Tool **609**
Hampton, NH

Coors Ceramics Company **910**
Golden, CO

B. White

An array of ceramic components made from both barium titanate and alumina, including substrates, resonators and GPS antenna elements; and ceramic polishing, laser machining, dicing and metalization services.

Cougar Components **1022**
Sunnyvale, CA

D. Cheadle, B. Stookey

RF and microwave cascadable amplifiers and amplifier assemblies for commercial, military and space applications, 0.1 to 6000 MHz low noise, high dynamic range, low voltage, AGC, limiting amps, limiters and attenuators, up to 1 W output in TO-8, TO-8B, flatpack, surface mount and SMA connectorized packages.

CRC Press Inc./Lewis Publishers **645**
Boca Raton, FL

J. Claypool, S. Carlisle

Best-selling and most recent publications, including *Power Frequency Magnetic Fields and Public Health, Principles and Techniques of Electromagnetic Compatibility* and *Handbook of Electromagnetic Monolithic and Composite Materials.*

CTT Inc. **1228**
Santa Clara, CA

Cuming Corp. **1051**
Avon, MA

D-Associates Inc. **346**
Winter Park, FL

J. Dinnan, A. Dinnan, E. Dinnan, K. Dinnan, P. Nye, J. Vatovec

Manufacturer's representative for ADL Circuits, Bel Fuse Inc., Celeritek, C-Mac Quartz Crystals, Conelec of Florida Inc., Delta Electronics Mfg. Corp., Ensign Corp., Industrial/Midwec Capacitor Corp., Insulated Wire Inc., KDI/triangle Electronics, Micro Substrates Corp., NTK Technical Ceramics, Precision Devices Inc., Precision Lamp, RLC Electronics, Vari-l Company and Wenzel Associates.

DBS Microwave Inc. **805**
El Dorado Hills, CA

B. Anderson, S. Fake, D. Lusky

Microwave and mm-wave upconverters and downconverters, including complete front ends to 60 GHz; 0.5 to 6 GHz GaAs FET amplifiers for low noise, power and high gain limiting; active frequency multipliers to 96 GHz; and low cost microwave and mm-wave amplifiers and multipliers for commercial applications.

Delphi Components Inc. **534**
Laguna Niguel, CA

Delta Electronics Manufacturing Corp. **423**
Beverly, MA

J. Gillen

Quality, USA manufactured, RF coaxial connectors, including BNC, TNC, N. SMA, SMB, SMC, TWINAX, GR874, HN, LC-LT, MHV, 75F OHM BNC 7 TNC, 700 OHM N, UHF AND 7/16 (DIN 47223)

Densitron Microwave Ltd. **549**
Southend, Essex, UK

R. Spicer, F. Raven

Coaxial and drop-in isolators and circulators covering the frequency range from 60 MHz to 189 GHz; isohybrids (integrated isolators and hybrid combiner) for cellular applications; custom and standard low noise and power amplifiers in the range from 500 MHz to 189 GHz; and custom subsystems, including up/down converters, with noise sources 09001 approved.

Dielectric Laboratories Inc. **1104**
Cazenovia, NY

G. Vorlop, E. Arnold, P. Wodzenski

RF and microwave ceramic capacitors, single and multilayer styles, transmission line capacitors, capcap software, E-field chokes, impedance transformers, passive complex impedance device (PCID), high dielectric ceramic substrates, metalization and etching and measurement services, with application support.

Ditom Microwave Inc. **534**
San Jose, CA

DowKey Microwave Corporation **708**
Ventura, CA

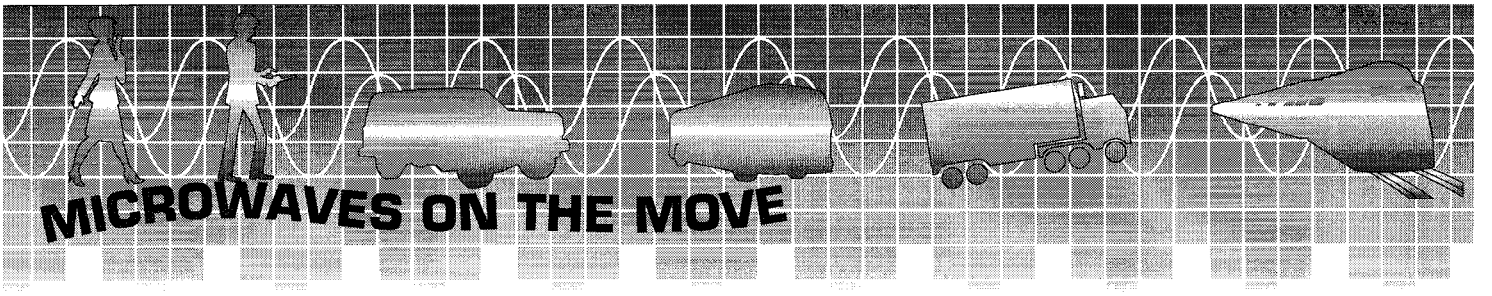
D. Murphy, J. Dysort, J. Williams, E. Egenberg

Electromechanical switches; coaxial and waveguide designs for RF, microwave and Hi-rel space applications; extensive catalog of standard parts, plus full customization capability; and SPDT to Sp12T, radial and exclusive in-line switches.

DMT
Carson, CA

B. Borlet, D. Colletta, G. Etzler, A. Cheung, P. Williams

Coaxial switches and filters. SPDT, multi and transfer switches available DC to 40 GHz with optional configurations, standard and custom filters and components.



DuPont Superconductivity **1223**
Wilmington, DE

D. Laubacher, A. Lauder, K. Hartnett, Z. Shen, C. Wilker

Custom, prototype and commercial superconducting components, devices and subassemblies; design support; high performance microwave components, including resonators, amplifiers, oscillators, filters, delay lines, splitters, combiners and antennas that exhibit high-Q, low insertion loss and phase noise; and high temperature superconducting thin films up to 3" in diameter with leading microwave properties.

Dynatech Microwave **1101**
Calabassa, CA

Dynatex International **352**
Santa Rosa, CA

P. Thompson, C. Elsbree

The DX-III Automatic Scribe and Break System, diamond dicing blades, dicing lubricants, lubricant injection systems, wafer expanders, and wafer mounting adhesives.

Dynawave Incorporated **846**
Georgetown, MA

C. Lewis, D. Gartzke, T. Scannelli, B. Brann, P. Leradi

RF/microwave coaxial connectors and cable assemblies for both the commercial and military markets, including SMA, Type N, TNC, (blindmate BMA Dynamate™ and Dynamite™); push-on (Dynapac™), high power commercial (Dynaloc™), Interconnects (Dynacom™) and custom design connectors.

Eagleware **723**
Stone Mountain, GA

EDO Corp./Barnes Eng. Div. **604**
Shelton, CT

EEV Inc. **1219**
Elmsford, NY

P. Fochi, A. Markiewicz, A. Sayers

TWTs and TWT amplifiers for radar, communications and ECM applications, including new lightweight range of STELLAR Ku-band 300 W and 500 W TWT amplifiers for satellite uplink systems; high performance receiver protectors; magnetrons for industrial heating applications; X- and Ku-band injection-locked magnetron amplifiers; and 250 KW S-band package magnetrons for radars.

E.F Johnson Company **525**
Naseca, MN

G. Pollack

A full range of quality RF subminiature connectors with SMA, SMB and SMC interfaces, designed to meet the electrical and mechanical performance specs of MIL-C-39012; and a broad line of electronic hardware products, spacers, variable capacitors and tube sockets.

EIP Metals LTD (Evered Tube Division) **642**
Birmingham, England

P. Wood, C. Estrada, T. Tripp

Standard and special profile waveguides together with a complementary range of accessories and passive components, featuring a new full range of INVAR (Nilo) for microwave filters and introducing Azaar brand precision side-wall frames to meet the special needs of circuit programs.

EIP Microwave Inc. **1343**
Milpitas, CA

I. Andres, S. Ashby

VXibus instruments, including microwave synthesizers, converters, downconverters and power amplifiers, and systems and field support microwave and mm-wave pulse and CW counters.

Electrodyne Systems Corp. **650**
South Hackensack, NJ

Ellisra Electronic Systems Ltd. **618**
Bene Beraq, Israel

U. Friedman, J. Feldfeber

Filters and multiplexers; couplers, solid-state RF sources (noise source, crystal controlled oscillator, comb, DRO, VCCO and active multipliers); frequency synthesizers and Pin diode switches (low and high power); splitters; high dynamic range, low noise, log IF, linear IF and DLVA amplifiers; SRAM memory modules; LED display modules; RF switch drivers; hybrids and signal processing components; circulators and isolators; multicouplers; switch matrices for RF and microwave bands; microwave solid-state boosting systems for TWTA applications replacement; solid-state transmitters for EW and communication applications; and super components.

EMC Technology Inc. **1239**
Cherry Hill, NJ

D. Markman, L. Catalina, D. Ferguson

Microwave components, including terminations, attenuators, programmable and temperature compensating attenuators, and hybrid couplers.

EMF Systems Inc. **1326**
State College, PA

J. Chernega, J. Chernega

Solid-state microwave sources for military and commercial markets, including crystal, dielectric resonator and phase-locked oscillators, and synthesizers and associated circuitry.

EMS Technologies Inc. **537**
Norcross, GA

C. Hine, J. Pippin

Engineering Information Inc. **1404**
Hoboken, NJ

R. Miller, A. Hutcheson

A variety of information services for engineers, ranging from EI Compendex Plus, applied Engineering's most comprehensive database with abstracts from journal articles and conferences to highly focused research summaries targeting 155 self-select topics; the literature on 10 industries; plug into the Internet with EI Pipeline; and newsletters and databases.

Epsilon Lambda Electronics **824**
Geneva, IL

Ericsson Components Inc. **1310**
Morgan Hill, CA

FILCOM **904**
Chelmsford, MA

Film Microelectronics **1411**
No. Andover, MA

Filtran Microcircuits Inc. **823**
Ottawa, Ontario, Canada

C. Sutton, N. Sutton, J. Devine, F. Scalzo

Precision microwave circuitry, including fine line/narrow gap circuitry with various plating combinations, proprietary sputtered blind hole approach, multilayer PTFE and thin film on ceramic.

Flexco Microwave Inc. **633**
Port Murray, NJ

M. Brewster, W. Pote

High performance flexible coaxial cable assemblies, including new UltraFlex, FCS and LCE low-loss assemblies that provide state-of-the-art performance, super-flexible ANA cable line with exceptional phase and amplitude stability.

Florida RF Labs Inc. **822**
Palm City, FL

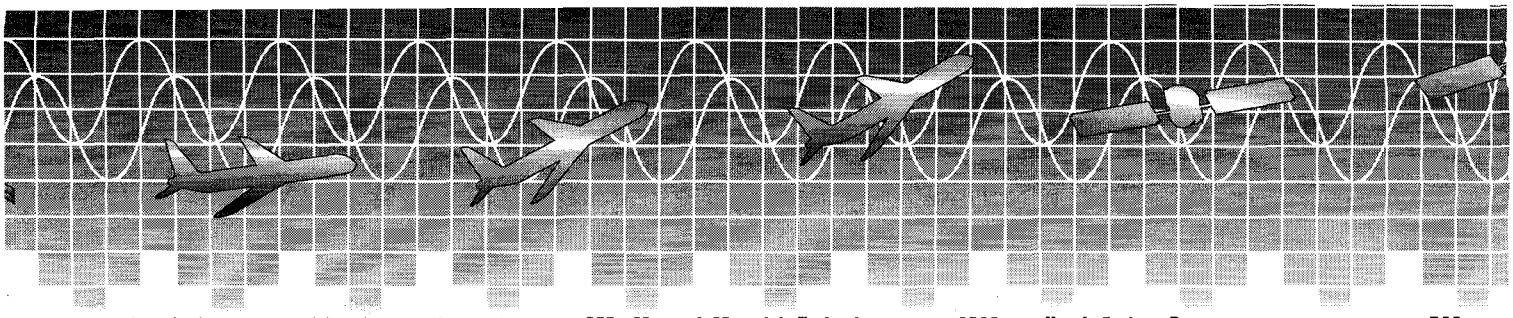
G. Fenex, G. Moore, D. Sampson

Thin-film, RF and microwave resistor products to 26.5 GHz, high power devices to 800 W, resistors, terminations, attenuators, flexible and semi-rigid coaxial cable assemblies, and coaxial delay lines.

Focus Microwaves Inc. **637**
Pointe Claire, Quebec, Canada

D. Dubouil, R. Meierer, C Tsironis

Noise and load pull on wafer setups, including coaxial 0.4 to 40 GHz, and waveguide 33 to 100



GHz high power amplifier design software, TRL calibration kits 0.1 to 50 GHz (APC-7, 3.5, K, 2.4 mm), load pull and noise characterization services and system leasing, and ultra wideband tuner system (1 to 40 GHz).

Fotofabrication
Chicago, IL

Frequency Electronics Inc. **1118**
Mitchel Field, NY

G. Kushner, L. Martire, M. Elwood

Frequency and time control products utilizing cesium, rubidium and quartz for satellites, military and communication applications; MMIC amplifiers and SDLAs; and DC/DC converters for space applications.

FSY Microwave Incorporated **1220**
Columbia, MD

W. Forrestel, J. Yania, F. Behdin, G. Mau, L. Kasal, D. Gildea

Precision, high performance IF, RF, microwave and DC to 40 GHz filters and multiplexers; topologies and configurations for space, commercial and military applications; and cellular, PCN and GPS filters and duplexers.

Fujitsu Compound Semiconductor **1300**
San Jose, CA

B. Utter, J. Zazkowski, R. Manchandani, W. Kennan, C. Khandavalli, M. Adamo, Y. Nemoto, S. Rupp

GaAs FET power transistors, low noise HEMT devices, microwave power amplifiers, and GaAs MMIC and MIC devices for wireless applications.

Gamma-f Corp. **1319**
Torrance, CA

M. Stupnik, G. Peale

Feed components for VSAT systems; passive microwave and mm-wave components; filters, diplexer, OMTs, polarizer, and waveguide assemblies; and design and manufacturing capabilities.

GBC Materials Corporation **1053**
Latrobe, PA

W. Golva

Engineered material sand components of glass, ceramics and hybrid compositions for electronic instrumentation, microwave, surface mount, and structural ware applications; metalized and nonmetalized "MELE" diode packages; and engineering services for prototypes and large volume production of intricate shapes dry-pressed from glass, ceramics, steatite, and spray-dried compositions made to specifications.

GEC - Marconi, Materials Technology **1213**
San Diego, CA

P. Dumbell, B. Coleman, M. Green

GaAs MMICs, including low cost transceivers for 2.4 GHz wireless applications and low noise HEMT amplifiers for 2 to 18 GHz operation; and custom foundry services.

Gel-Pak Div./Vichem Corp. **1109**
Sunnyvale, CA

General Microwave Corporation **911**
Amityville, NY

R. Schachter, M. Balfour, T. Salina

Microwave Pin diode control components, including attenuators, modulators, switches, phase shifters, IQ vector modulators, coaxial mm-wave; microwave oscillators, including voltage-controlled, digitally-tuned and dielectric resonator; and instrumentation, including automatic single and dual channel peak power meters, average power monitors, radiation hazard measuring systems and RF/microwave radiation badges.

GGB Industries Inc. **1237**
Naples, FL

D. Place, B. Jamison, G. Boll, H. Boll, B. Most

DC to 120 GHz microwave probes for probing on wafer or packaged devices; calibration substrates and automatic calibration software; high frequency (DC to 67 GHz) probe cards with up to 120 points; low inductance power supply probes; high impedance (0.02 pf) active Picoprobes for use on internal nodes; and high performance microwave cables.

GHz Technologies Inc. **710**
St. Laurent, Quebec, Canada

Z. Huszar, J. Lindover, J. Devlin, J. Tinkler, J. Miller, J. L'Ecuyer

Microwave passive components, including filters, circulators, isolators, couplers, adapters, terminations and waveguide assemblies.

Giga-Tronics Inc. **1243**
San Ramon, CA

Gilbert Engineering Co., Inc. **1207**
Glendale, AZ

R. Dentremont, J. Lokken, R. Shamblin, C. Baker, J. Zorzy

GPO™ and GMS™ blind-mate microwave coaxial connectors for hermetic and nonhermetic applications; and custom high density blind-mate products for backplane and multi-pin microwave applications; and special and standard configurations in N, TNC, SMA and other interfaces.

Charles E. Gillman Company **547**
South Holland, IL

Harris Farinon Components **744**
San Carlos, CA

Haverhill Cable & Mfg. Co. **923**
Haverhill, MA

Herotek Inc. **1313**
Sunnyvale, CA

C. Lai, K. Lai , J. Tatum, E. Colety

0.01 to 40 GHz, detectors, including limiter/amplifier/filter detectors, comb generators, multipliers, GaAs FET low noise and power amplifiers, limiters, switches, harmonic mixers, downconverters, integrated subsystems, commercial cellular radio, PCS; power amplifiers, threshold detectors and frequency doublers.

Hewlett Packard Company **833**
Palo Alto, CA

The latest solutions in the area of high frequency EDA software, microwave component test, test systems and accessories, and microwave and RF design systems.

Hewlett Packard/Avantek **926**
Santa Clara, CA

6 to 18 GHz amplifiers, oscillators, power modules and surface-mount components for military and industrial applications; and surface-mount semiconductor products, including new 3 and 5 V silicon and GaAs RF IC amplifiers in STO-143 (7.3 mm^2) and SOT 363 (4.2 mm^2) packages, Schottky diodes, high frequency transistors and internally-matched power FETs.

Hexawave Inc. **1403**
Hsinchu, Taiwan

J. Chiao, P. Yang

Low cost power FETs for cellular or PCS applications; GaAs MMIC switches, cellular power modules; and OEM assembly services, including thin film and hybrid circuits.

Hittite Microwave Corporation **623**
Woburn, MA

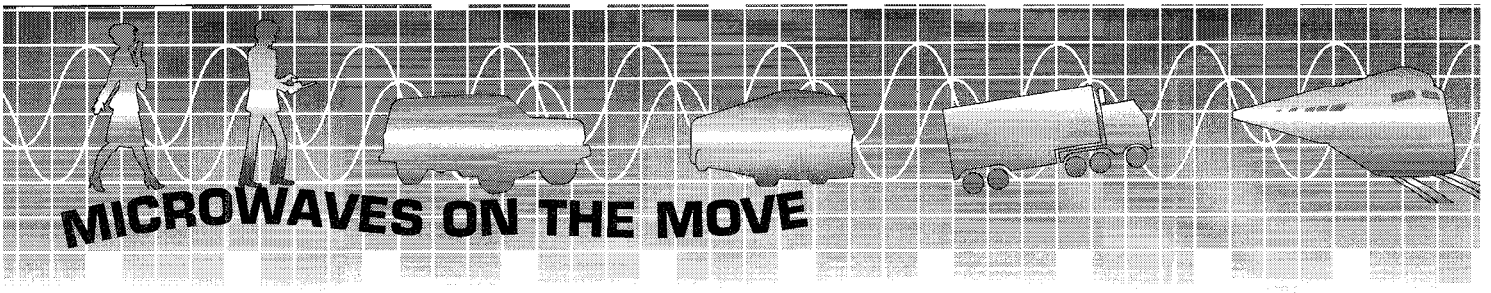
B. Bedard

MMIC and surface mount mixers, switches, variable attenuators, amplifiers, and VCOs; custom designed MMICs and multifunction assemblies; and low cost mixers and TR switches in 8-lead SOIC packages for commercial applications.

Huber + Suhner Inc. **1409**
Essex, VT

Hughes Aircraft Co. (EDD/MPD) **443**
Los Angeles, CA

IFR Systems Inc.
Wichita, KS



Insulated Wire Inc. **1008**
Danbury, CT

S. Bruno, A. Nixon, M. Brewster

Low loss microwave cables; cable assemblies to 60 GHz, including RE-FLEX, (alternative to standard semi-rigid) and TIIE-FLEX (internally ruggedized assemblies); and wire products, including composite cables and wires.

Integrated Microwave **1025**
San Diego, CA

Inter-Continental Microwave **843**
Santa Clara, CA

W. Schuerch, D. Pierce, D. Schuerch, P. Cortes

The design and manufacture of microwave test fixtures and noncoaxial calibration standards; an extensive line of manual and fully automatic probing systems and device handlers; automatic testing of surface mount devices; and custom designs of both manual test fixtures and automatic test systems.

International Mfg. Svcs. Inc. **521**
Portsmouth, RI

D. McHenry, N. Attemann

Thick and precision thin-film chip resistors for surface mount and hybrid applications; solder, epoxy and wire bond attachments; and engineering kits.

Ion Beam Milling Inc. **922**
Manchester, NH

R. Quagan, J. Kelley, J. McDonnell, G. Quagan

Custom metalized substrates (resistor and conductor), microwave integrated circuits (planar R, L, and C integration); YIG and SAW circuit, discrete thin-film resistor chips; thin-film chip inductors, thin-film chip attenuators; chip carriers and mother boards; diamond dicing (one-half mil. tol); contract photolithography (1.5 μm); and custom ion beam milling services.

ITS Electronics Inc. **822**
Concord, Ontario, Canada

ITT GTC **728**
Roanoke, VA

J. Salvey, B. Schmitz, C. Lindberg, G. Fraser, G. Baker, J. Griffiths, V. Sadhir, J. Naber, M. Drinkwine, D. Fisher

GaAs radio frequency integrated circuits for low cost, high performance wireless communications applications, including AMPS cellular telephone power amplifiers for AMPS, ETACS, NMT and GSM; ISM spread spectrum cordless telephone power amplifiers; and power amplifiers for DECT, PCS and PCN applications.

JCA Technology **1226**
Newbury Park, CA

JFW Industries **753**
Indianapolis, IN

Johanson Dielectrics Inc. **648**
Sylmar, CA

S. Cole

New high-Q multilayer chip capacitors, a high performance/low cost alternative to porcelain high-Q capacitors (also available in surface mount case sizes; 0603 size high-G NPO chip capacitors for wireless applications; Lasertrim® laser tunable RF capacitors for VCO tuning, filter tuning and impedance matching at 300 to 2000 MHz; single layer wafer style microwave capacitors suited for RF multichip module applications; and miniature 04020 and 0603 size MLCs.

Johanson Manufacturing Corporation **1120**
Boonton, NJ

P. Erins

Air dielectric trimmer capacitors; GIGA-TRIM GHz trimmer capacitors; Thin-Trim, Seal-Trim and Cera-Trim ceramic trimmer capacitors; microwave tuning elements and fiber-optic interconnect components.

John Wiley & Sons Inc. **1113**
New York, NY

Johnstech International Corp. **850**
Minneapolis, MN

K & L Microwave Inc. **1001**
Salisbury, MD

J. Price

Tubular, tunable, LC, cavity and antenna systems products, microwave filters and multiplexers, switched filter banks, subassemblies, distribution systems, and coaxial and PIN diode switches.

Kaman Instrumentation **626**
Colorado Springs, CO

T. Dillahunty

Fully annealed stainless steel, hermetically sealed, all-welded, EW class cable assemblies that meet MIL-T81490 type II, class 2 specifications for semiflexible construction.

Kaman Sciences Corporation-Locus **1324**
State College, PA

M. Wilson, D. Richards, B. Caplan

Solid-state microwave amplifiers and redundant systems for satellite earth stations; special-purpose amplifier systems for point-to-point and direct broadcast applications; and MIC hybrid components and subsystems for communications and electronic warfare.

Karl Suss America Inc. **1237**
Waterbury Center, VT

D. Place, B. Jamison, G. Boll, H. Boll, B. Most

Manual, semi-automatic and fully automatic microwave probing equipment and accessories, including manual and motorized probe heads and microscope movements, DC to W-band probes, microscopes, microwave and thermal chucks, localized environmental chambers, tight enclosures, isolation tables, calibration substrates, automatic calibration software, pattern recognition, material handling and laser cutters.

KDI/triangle Electronics **718**
East Hanover, NJ

Kevlin Corp. **1405**
Wilmington, MA

M. Federico, J. Rice, J. Carlino

Microwave rotary couplers, high frequency connectors and components for radar and communication systems; and joint venture slip rings.

Kimberley Communications Consultants Ltd. (KCC) **726**
Nottingham, UK

D. Johns

Micro-stripes 3-D field simulator, based on the transmission-line matrix method (TLM) and capable of simulating arbitrary geometries both in the time domain and frequency domain, which are versatile, efficient and window-based and find applications in S-parameters of waveguide junctions, 3-D circuit structures, antenna matching and radiation patterns.

KW Microwave Corp. **606**
Carlsbad, CA

D. Kothari, S. Tantod, D. Tantod

Defense/commercial microwave components, such as filters, multiplexers, isolators, circulators, frequency multipliers, switch filter bands and subassemblies.

Kyocera America, Inc. **704**
San Diego, CA

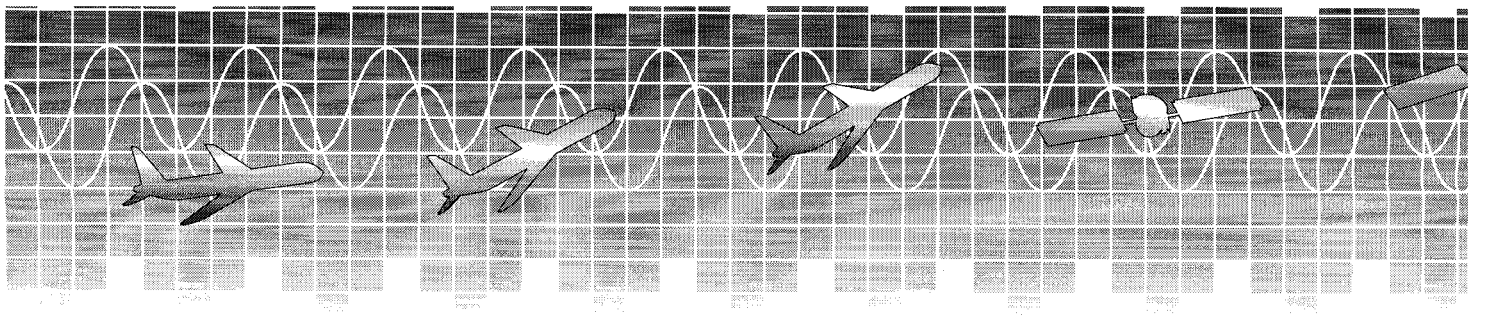
C. Fallon, K. Gaughan

Metalized packages, including low noise microwave, transistor, microwave power FET, silicon power transistor, GaAs IC and MICs.

Lemo RF **1309**
Santa Rosa, CA

I. Bhawani, C. Taylor

High performance, custom designed microwave/mm-wave coaxial connectors, including 18 and 26 GHz SMAs, 3.5 mm, 2.92 mm, 2.4, mm 1.85 mm and other special application types; low cost self-latching 50 and 75 ohm subminiature connectors for frequencies up to 4.8 GHz, as well as oth-



er miniature coaxial connectors featuring the push/pull latching system.

Litton Airtron **719**
Morris Plains, NJ

Logimetrics Inc. **944**
Plainview, NY

R. Yantz, M. Fiegenbaum

High power TWT amplifiers from 0.5 to 95 GHz and RF power levels 1 W to 50 kW for use in both military and commercial applications for ground and airborne platforms; and transmitters for wireless applications, SATCOM, radiated susceptibility sets, jamming systems, threat simulators, antenna test sets and antennas.

Logus Microwave **553**
West Palm Beach, FL

Loral Microwave **800**
Hauppauge, NY

Lorch Microwave **747**
Salisbury, MD

R. Bernstein, K. Bernstein, M. Ferrand

RF and microwave signal processing components, including filters, mixers, couplers, power dividers and switches; base station and wireless products to 1000 W; microminiature and surface mount components; and signal distribution products, including switch matrices, multicouplers and switched filter banks.

LPKF CAD/CAM Systems **437**
Portland, OR

G. Eiemrs

Prototype circuit boards fabrication, including five models with through-hole capability; and RF and microwave boards form Gerber or HPGL input and all material types, without chemicals.

Lucas Signatone **1412**
Gilroy, CA

Lucas Weinschel **1000**
Gaithersburg, MD

R. Stephens, G. Smith, L. Pregley, G. McNamara, W. Dentinger

Microwave and RF fixed, step, variable and programmable attenuators, terminations, loads, power splitters and dividers, couplers, adapters, connector systems and calibration instrumentation.

M/A-COM **801**
Lowell, MA

MAC Technology **515**
Klamath Falls, OR

MacNeal-Schwendler Corp. **909**
Los Angeles, CA

Magnum Microwave **1125**
Fremont, CA

A. Rosenzweig, R. Bridge

DC to 26.5 GHz frequency mixers in connectorized, drop-in and microstrip packages; 25 MHz to 12 GHz voltage-controlled oscillators; low phase-noise dielectric resonator; coaxial resonator; 0.5 to 28 GHz cavity oscillators, available free-running, manually tunable, AFC tunable and 0.5 to 28 GHz phase locked; fast switching 2 to 18 GHz solid-state switches from SPST through SP5T; and integrated assemblies.

Marconi Instruments **1237**
Allendale, NJ

R. Munden

Microwave and RF test equipment.

Mast Microwave **1405**
Wilmington, MA

Maury Microwave Corporation **1033**
Ontario, CA

M. Maury, J. Adamson, B. Pastori, D. Smith, G. Simpson

Precision microwave instruments and components covering the spectrum from DC to 110 GHz, including the model MT2075C noise gain analyzers; the noise frequency extender; solid-state noise generators; the noise calibration system; the automated tuner system; metrology grade sliding terminations; connector gauges; coaxial, waveguide and mm-wave calibration kits; vector automatic network analyzers; precision mm-wave waveguide devices; high performance airline standards; 1.05 max SWR waveguide-to-coaxial adapters; and high precision coax-to-coax adapters.

MBNA Marketing Services **543**
Camden, ME

Menlo Industries Inc. **636**
Fremont, CA

A. Cotten, F. Pietroporte, D. Tuccori

RF amplifiers (LNAs, medium and high power), detector log video amplifiers, up- and downconverters, mixers and thin-film foundry services; build-to-print turn-key services for thin film and PCB technologies; and laser welding services.

Merrimac Industries Inc. **729**
West Caldwell, NJ

B. Dornan, W. Joswick, E. Niemiec, T. Ramsden

Power dividers, quadrature hybrids, hybrid junctions, phase shifters, attenuators, directional couplers operating at frequencies up to 65 GHz, mixers and I/Q products operating at frequencies up to 18 GHz and case free devices for MMIC circuits.

Metelics Corporation **1121**
Sunnyvale, CA

J. Godbout, F. Kwan, C. McAllister

Microwave diodes and components, including Schottky barrier, PIN, tunnel, step recovery, tuning and limiter diodes; diodes; MIS capacitors; detector modules; switches; and microstrip assemblies.

MH&W International Corporation **1401**
Mahwah, NJ

R. Kiernan

MIC Technology Corp. **1122**
Richardson, TX

MICA Microwave Corporation **1212**
San Jose, CA

R. Wood, F. Mills, N. Khayat, A. Campbell

RF and microwave ferrite devices, including coaxial, drop-in, MICA-PAC surface mount circulators and isolators for cellular, PCN, INMARSAT/GBS, LOS and COMSAT/SATCOM applications; and microwave detectors (tunnel, biased and zero biased Schottky) and limiters for RF to DC/Video interface and power protection.

Micro-Coax **927**
Collegeville, PA

B. Ash, D. Birch, L. Deery

Microwave and RF components, including semi-rigid cable, UTIFLEX flexible microwave cable, alumiline hand formable cable, In-A-Cable microwave filters, miniature coaxial components and custom delay lines.

Microelectronics Ltd. **523**
Rishon LeZion, Israel

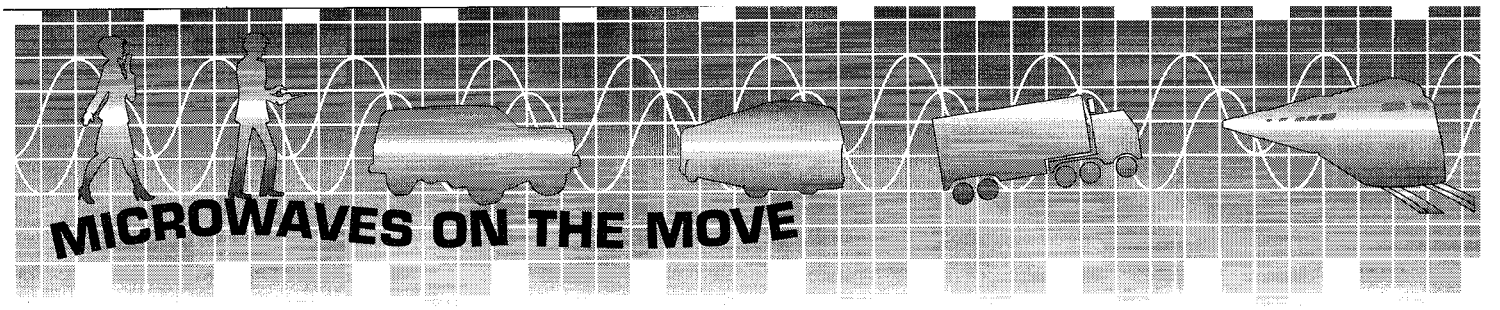
J. Golany

Fixed and variable capacitors used in RF through microwave applications; MLC type capacitors products,including standard and nonmagnetic, high Q, high temperature-high Q, temperature stable and high capacitance chip capacitors; SMD chip capacitors; medium and high power RF multilayer capacitors, air, sapphire and glass dielectric trimmer capacitors; and tuning devices; and high precision mechanical parts.

Microelectronics Technology Inc. **1402**
Hsinchu, Taiwan, Republic of China

P. Chen, A. Yen

The TC2011 C-band 5 W SCPC RFE, waveguide filters, and a 23 GHz transceiver.



Micro Lambda Inc. **1252**
Fremont, CA

R. Leier, J. Nguyen

YIG-based products, 500 MHz to 26.5 GHz oscillators, 500 MHz to 40 GHz filters, 200 MHz to 22 GHz multipliers, integrated assemblies, and miniature YIG devices for VXI and permanent magnet devices for commercial applications.

MicroMetrics Inc. **343**
Londonderry, NH

Microprecision **1422**
St. Laurent (Montreal), Quebec, Canada

Microsource Inc. **649**
Santa Rosa, CA

C. Antell, L. Forant, M. Lampenfeld, C. Maker, J. Poelker

YIG tuned components, including 0.5 to 26.5 GHz low phase noise oscillators, YIG filter oscillators; 0.5 to 26.5 GHz bandpass filters (single to multiple stages 10 to 600 MHz bandwidths); band reject filters; multipliers; synthesizers; narrowband to multi-octave, integrated subsystems; receiver front ends, and up-downconverters.

Microtech Inc. **1328**
Cheshire, CT

J. McGregor, B. Hallock, J. Marino, D. McCue

Millimeter flexible waveguide covering frequencies to 110 GHz; flexible, twistable waveguide covering frequencies to 50 GHz, and related transmission line components in both rectangular and double-ridged styles, including rotary joints, directional couplers, magic tees, pressure windows, waveguide-to-coax transitions, high, medium and low power terminations, standard gain horns, and standard and custom-design assemblies.

Microwave Communications Labs **1306**
South Chelmsford, MA

Microwave Development Co. Inc. **908**
North Andover, MA

Microwave Development Labs Inc. **1318**
Natick, MA

E. Scollins, W. Berry, J. Norelli

Adapters, assemblies, attenuators, bends, twists, corporate feeds, couplers, crystal holders, circulators, diplexers, filters, flanges, gaskets, SSB generators, hybrids, isolators, mixers, mixer duplexers, monopulse comparators, rotary joints, double ridge, phase shifters, power dividers, rotary switches, tees, terminations, transitions, waveguide tubing, windows and suspended substrates.

Microwave Device Technology Corp. **506**
Westford, MA

T. Ramachandran, M. Ayyagari

GaAs Gunn, IMPATT, varactor, Schottky, multiplier, ISIS and PIN diodes, Gunn oscillators, PLOs, frequency multipliers, mixers, switches, and finline detectors; and passive components (18 to 110 GHz) including Y-junction isolators, circulators, ferrite polarization switches, 3 dB hybrids, cross guide couplers, manual waveguide switches and waveguide assemblies.

Microwave Engineering Corp. **613**
North Andover, MA

D. Cloutier, G. Smith

0.2 to 75 GHz passive components for commercial and military applications; rigid and flexible and double ridge waveguide, high power components, filters, multiplexers, horns, coaxial and stripline, couplers, loads, mismatches, transitions and mm-wave antennas.

Microwave Engineering Europe **513**
London, UK

Microwave Journal **612**
Norwood, MA

H. Howe, H. Ellowitz, E. Johnson, C. Sheffres, W. Cook, F. Bashore, C. Blanchard, A. Vander Neut, M. Urann

Microwave Journal subscription and editorial information.

Microwave Printed Circuitry **619**
Lowell, MA

M. Casper, C. Casper, R. Deitz

Microwave Product Digest **646**
Hackensack , NJ

Microwave Technology **826**
Fremont, CA

W. Wilson, A. Heribg, A. Roberts, T. Quiqley, K. Renwick, D. Apte

100 MHz to 40 GHz GaAs FET devices in chip form and in packages; GaAs FET hybrid gain modules operating at frequencies to 23 GHz; power modules for wireless applications; Si power devices, linear class A amplifiers and pulsed amplifiers operating at frequencies up to 1.4 GHz; and connectorized low noise, limiting and power amplifiers operating at frequencies up to 26.5 GHz.

Microwaves & RF **1148**
Hasbrouck, NJ

MIC Technology Corp. **1122**
Richardson, TX

B. Mitchell, K. Callery, M. Barna, M. Doherty

Passive circuit solutions for the microelectronic industries, including PIMIC™ process technology that provides high frequency chip interconnect and packaging solutions by incorporating traditional discrete components in a solid-state approach; and RF, microwave, digital and mixed signal environments accommodated in thin-film multilayer designs.

Milcom International **345**
Irvine, CA

B. Hunter, K. Nam, T. Ha

RF power amplifiers for commercial applications, such as cellular, air to ground telephony, paging and SMR; and the MCA800-250 standard product for digital applications that is a rack mounted, very linear multi-channel amplifier system with 250 W peak.

Millitech Corp. **842**
South Deerfield, MA

N. Deo, R. Huguenin, D. Dixon, A. Mathew, J. Lowe

Millimeter-wave and submm-wave active and passive components, oscillators, mixers, multipliers, detectors, isolators, antennas, subassemblies and assemblies, systems, Gaussian optic components, frequency extension units for mm-wave test applications, block downconverters, and wideband receiving subsystems.

Milliwave **508**
Diamond Springs, CA

J. Young, J. Rosenberg, J. Muir, D. Murrow, P. Willis, R. Young

Amplifiers, frequency multipliers and up- and downconverters in mm-wave and microwave frequencies (0.1 to 95 GHz) that are easily integrated; and standard and custom designs.

Mini-Circuits **1143**
Brooklyn, NY

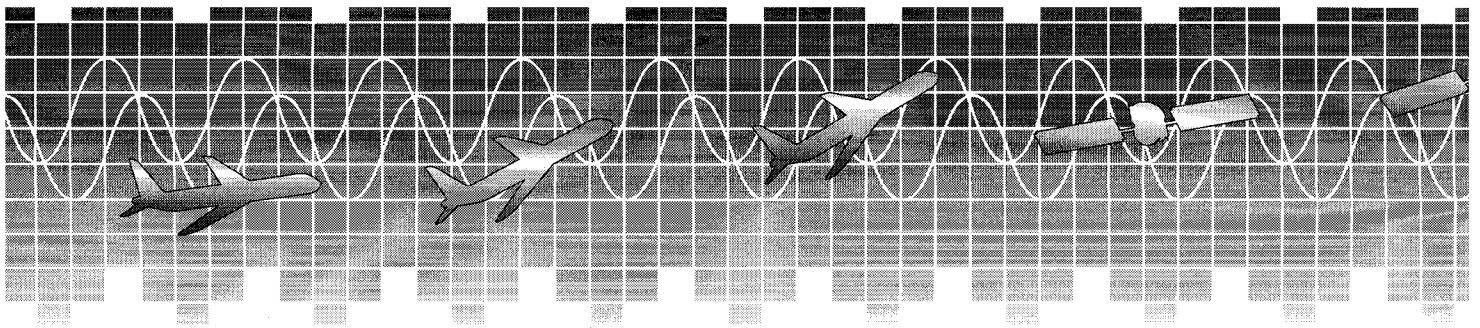
H. Kaylie R. Kaylie, G. Kaylie, R. Stolz

Standard and specialized surface-mount and plug-in IF/RF and microwave components, such as frequency mixers, power splitter/combiners, amplifiers, attenuators, terminations, directional couplers, bias-tees, filters, limiters, frequency doublers, phase detectors, phase modulators, switches and drivers, transformers and voltage-controlled oscillators.

Mini-Systems Inc.,
Electronic Package Division **1307**
Plainville, MA

D. Federschneide

1 to 6 GHz glass sidewall packages for microwave applications to package low noise or linear amplifiers; surface mount microwave packages; and custom microwave machined housings.



Mini-Systems Inc., Sunbelt Microelectronics Division **1307**
Deltona, FL

A. Lepane

Custom hybrid circuits utilizing chip and wire surface mount technology; metalized substrates; custom packaging; resistor trimming; and laser marking.

Mini-Systems Inc., Thick Film Division **1307**
North Attleboro, MA

P. Creter

Thick-film chip resistors, and standard and custom size attenuators with full back electrode metalization.

Mini-Systems Inc., Thin Film Division **1307**
North Attleboro, MA

P. Solan

Thin-film metalized substrates, circuits, resistor networks, chip resistors, chip attenuators, MOSCAPS and arrays.

Mitec Electronics **504**
Pointe Claire, Quebec, Canada

J. Robinson, A Bertsch

Active and passive microwave components, including filters, multiplexers, circulators, isolators, couplers, electroforming, terminations, flexible waveguides and MICs, and subsystems, including integrated components and MIC assemblies and modules.

Miteq Inc. **1018**
Hauppauge, NY

T. Heil, H. Kiiss, H.E. Kiiss, D. Krautheimer

1 MHz to 50 GHz single- and multifunction components, including low noise amplifiers in moderate and ultrawide bandwidths; frequency sources, including cavity-tuned oscillators, VCOs, DROs and phase-locked cavities;and signal processing components, including mixers, mixer-pre-amplifiers, image reject mixers, switches PIN attenuators, phase shifters, limiters, discriminators, log amplifiers and multifunction assemblies.

Morgan Matroc Ltd. **1406**
Wrexham, Clwyd, N. Wales, UK

R. Jackson, R. Brown, L. Castrodale, B. Roznoy, G. Finn, J. Vanderluis, R. Ragonese

Ceramic dielectric components, including materials with dielectric constants from 10 to 88, offered as pucks and coaxial resonators manufactured to customers requirements and 100 percent tested for frequency; and engineering and sales services.

Morrow Technologies Corporation **1308**
Largo, FL

T. Fredrick, D. Wicks

The V9054 1.6 GHz VXI spectrum analyzer, which is C size, message-based instrument with an input frequency range to 1.6 GHz, amplitude range of –120 dBm to +20 dBm, featuring fully synthesized frequency control, while only occupying two VXI slots.

Motorola CSPD **1301**
Phoenix, AZ

D. Sundby

RF products, including discrete transistors, hybrid amplifiers and RF integrated circuits; and RFIC chip sets in the 1.8 to 2.4 GHz range for use in the personal handy phone, wireless LAN, DECT and PCS.

Murata Electronics North America Inc. **436**
Smyrna, GA

R. Drogos

Multilayer, microwave and trimmer capacitors, RF microwave filters, LC chip filters, SAW filters, chip delay lines, microwave connectors, RFI/EMI filters, resonators, oscillators, duplexers, isolators, and associated electronic components.

M-Wave, Inc. **625**
Bensenville, IL

See Poly Circuits and PC Dynamics entries.

Nanowave Technologies Inc. **710**
Mississauga, Ontario, Canada

Z. Huszar, J. Lindover, J. Devlin, J. Tinkler, J. Miller, J. L'Ecuyer

Microwave low noise amplifiers, solid-state power amplifiers, up- and downconverters, phase-locked oscillators, microwave subassemblies, and switches and limiters.

National Instruments **1149**
Austin, TX

S. Rust

30 new drivers for RF instruments, made possible by partnerships established with leading RF instrument vendors worldwide, using Lab VIEW and LabWindows/CVI drivers telecomm test equipment and other RF instruments can easily be integrated in a test system.

Nedrud Data Systems **1111**
Melbourne Beach, FL

Nexus Media **653**
Swanley, Kent, England

Northeast Microwave Systems Inc. **1419**
Corcord, NH

NTK Technical Ceramics **738**
Orlando, FL

M. Ota, M. Sato, S. Ursino, R. Hanson

Resonators, substrates and filters.

Olin Aegis **622**
New Bedford, MA

M. Medeiros, S. Benisatto, C. Orphanides

Hermetic, microwave and RF metal packages utilizing matrix metal composite and ceramic feedthrough technology.

Optimization Systems Associates Inc. **722**
Dundas, Ontario, Canada

J. Bandler, R. Biernacki, Q. Cai, S. Chen, R. Hemmers, P. Grobeiny

OSA90/hope, the only general purpose nonlinear/linear simulation and optimization software system offering open architecture Datapipe™ and novel Space Mapping™ techniques; HarPE, a powerful software system for complete device characterization (from small and/or large signal data), simulation, optimization and statistical modeling; and Empipe™, a smart interface for electromagnetic optimization including arbitrary structure Geometry Capture™.

Optotek Ltd. **924**
Kanata, Ontario, Canada

R. North, S. Dindo, D. Kennedy

MMICAD, a linear Simulator with SPICE-like features of frequency and parameter sweeping, user-defined models, network analyzer control and a large library of manufacturers data; and SALSA, a development tool for large signal transistor models for input into SPICE and other large signal simulators, including comprehensive model support.

Ortel Corp. **421**
Alhambra, CA

Oscillatek **1106**
Olathe, KS

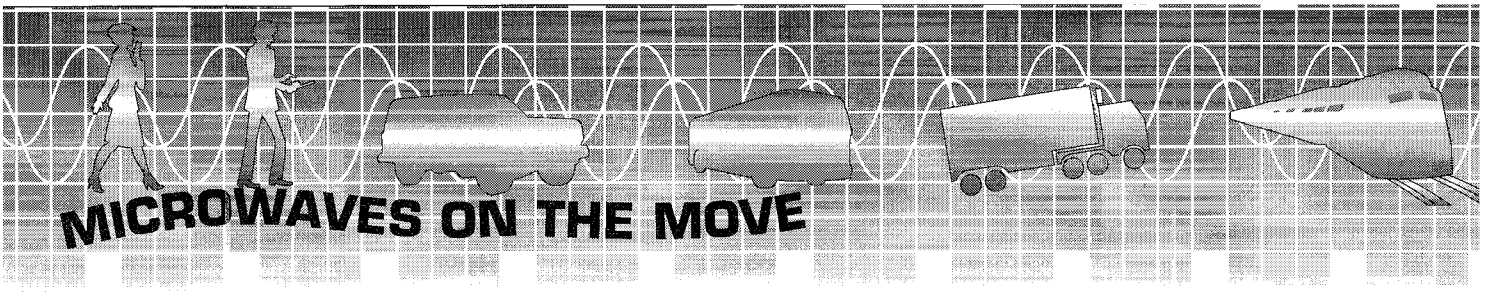
B. Beck, M. Bowling

Precision crystal oscillators for military, aerospace and commercial applications; and TCXOs, OCXOs, VCXOs, clock oscillators and MIL-0-55310 hybrid clock oscillators.

Pacific Coast Technologies **1151**
Wenatchee, WA

Pacific Monolithics Inc. **1119**
Sunnyvale, CA

Panasonic Industrial Company **629**
Secaucus, NJ



PC Dynamics **625**
Frisco, TX

L. Eslinger, J. Holbrook, C. Malone, B. Amsler

Precision, PTFE based microwave circuits for military, space and airborne applications; and a complete in-house manufacturing capabilities, including double sided, stripline, multilayer, pre-bonded metal backed and circuit panels up to 12 feet in length for antenna applications, with military qualifications to MIL-P-55110, WS-6536 and cleared to confidential and secret status.

Philips Semiconductors **707**
Sunnyvale, CA

T. Topalian

Devices for wireless communications applications, including integrated circuits, such as RF amplifiers, compandors, FM IF systems, audio and data processors, RF front ends, frequency synthesizers, pagers and data receivers; and discrete semiconductor products, such as RF wideband transistors, hybrid wideband amplifiers, CATV amplifier modules, RF power transistors/modules, microwave transistors and video amplifier modules, circulators and isolators.

Phoenix Company of Chicago Inc. **1408**
Wood Dale, IL

D. Pierce, T. Barron, N. Radojkovich

Subminiature and microminiature coax connectors, D-subminiature combination connectors, coaxial contacts, assorted mounting hardware, coaxial contacts, and custom cable assemblies for flexible, conformable and semi-rigid cable groups with post-molded, phase matching and delay line capabilities.

Picosecond Pulse Labs **1211**
Boulder, CO

J. Andrews

Pulse generators; DC to 40 GHz broadband coaxial components, including bias tees, amplifiers, transformers, and attenuators; and calibration standards.

Piezo Crystal Company **1146**
Carlisle, PA

J. Lehr

Quartz crystals and crystal oscillators for telecommunication applications, including the DHXO directly heated crystal oscillator.

Piezo Technology Inc. **427**
Orlando, FL

P. Dechne

Frequency control products, including SC- and AT-Cut crystals, monolithic and discrete crystal filters, LC, cavity and combline filters, OCXOs, TXC0s, VCXOs; RF subassemblies and hybrid technology.

P/M Industries **1233**
Portland, OR

P. Parks, C. Parks, M. Parks, G. Kingsbury

P/M Industries manufacturers HYPERFINE polished substrates, which have a surface finish of less than or equal to 0.5 micro inch; laps, polishes and diamond saws ceramic substrates; laser drills and scribes substrates; laser resistor trims thin, thick and polymer thick films; performs passive and functional trimming.

Poly Circuits **625**
Bensenville, IL

In-house manufacturing capabilities to produce cost effective PTFE printed circuit boards for microwave applications, including double sided, stripline, multilayer and mixed dielectric multilayer circuits, and patented Flexlink® process for bonding circuits to metal heat sinks using a thermally and electrically conductive adhesive.

Polyfet RF Devices **825**
Camarillo, CA

Power Systems Technology **1334**
Melville, NY

Precision Tube Co. Inc. **915**
Salisbury, MD

Q-bit Corporation **607**
Palm Bay, FL

F. Decker

Transmit power amplifiers, including feedforward intermod cancellation techniques offering excellent efficiency, temperature stability and intermodulation performance; base station receive amplifiers providing extremely low noise and very high intercept points; and RF feedback amplifiers constructed using a patented Power Feedback technique and yielding low SWR and high dynamic range.

Quantum Epitaxial Designs Inc. **1304**
Bethlehem, PA

W. Weisbecker, D. Martel

2", 3", 4" and 6" compound semiconductor epitaxial MBE wafers; high quality epitaxial materials consisting of GaAs, AlGaAs and InGaAs on GaAs and InP substrates; two single wafer Intevac modular GEN-II MBE systems configured for production and R&D, and MESFETs, HEMTs (single and double planar doped for low noise and power applications), and lattice matched HEMTs that include pseudomorphic and delta iterations.

Questech Services **1311**
Garland, TX

K. Keough, E. Case

Advanced laser machining of thin- and thick-film ceramic substrates, including hole sizes to below 0.001" diameter; superior AlN and BeO machining capabilities; and active and passive resistor trimming, including low value, tight tolerance and ratio trims; and diamond sawing, marking and serialization of all microelectronic materials.

Raytheon Company **901**
Andover, MA

P. Gifford, D. Maki, M. Sheade, R. Pengelly, R. Donahue

Gallium arsenide wafer fabrication and T/R module production, including MMIC chips for both military (solid-state phased array radar) and commercial (wireless voice and data, DBS, VSAT and SATCOMM) applications.

Raytheon Company, MSD **733**
Quincy, MA

Reeves-Hoffman **644**
Carlisle, PA

D. Bobb, T. Faust

Quartz crystals from 1 kHz to 155.52 MHz fundamental and up to 1 GHz overtone; crystal oscillators, TCXOs, VCXOs, OCXOs and clocks; crystal filters using high frequency fundamental crystals up to 155 MHz; and glass-to-metal seal hermetic products, such as hybrid and crystal bases.

Rel Comm Technologies Inc. **710**
Salisbury, MD

J. Huszar, J. Lindover, J. Devlin, J. Tinkler, J. Miller, J. L'Ecuyer

Enhanced application specific coaxial relay products for the commercial and industrial wireless telecommunication industry operating from DC to 26.5 GHz.

REMEC Inc. **1335**
San Diego, CA

G. Margard

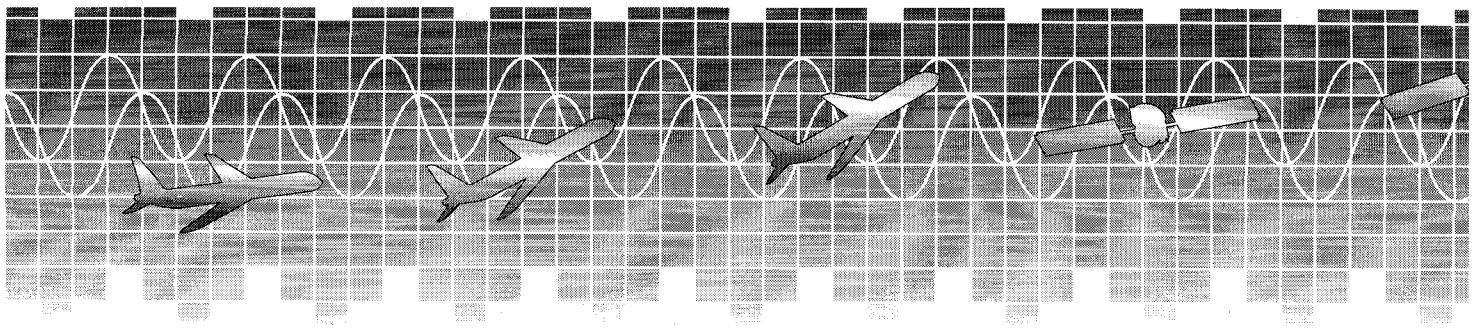
Switched filters, PIN diodes, channelized filter assemblies, filters and multiplexers, build-to-print services; and RF/microwave assemblies and components for the aerospace telecom industry, including supercomponents and subassemblies, integrated amplifier assemblies and up/down frequency converter assemblies.

Republic Electronics Corp. **428**
Wilkes-Barre, PA

Resin Systems Corp. **1332**
Amherst, NH

D. Prawdzik, W. O'Hearn, D. Makowsky, M. Plant

Low, medium and high power microwave loads, absorbers and terminations; pourable casting compounds; and rod, plate and square stock materials.



Res-Net Microwave, Inc. **424**
Largo, FL

M. Giacalone, R. Mayo, S. Chatarpaul, P. Korrie, C. Stout, N. Giacalone

Attenuators, terminations and resistors for the RF and microwave industry for space, military, commercial and medical applications; and a complete line of semi-rigid coaxial cable assemblies fabricated with copper, aluminum or stainless steel outer conductor.

RF Design **651**
Englewood, CO

D. Premo, J. Caid, M. Henry C. Solomonson

A publication for wireless and RF engineers, including technical and tutorial information about the wireless industry.

RF Micro Devices **1400**
Greensboro, NC

L. Coward

Standard and custom RF integrated circuits for wireless applications; and components, including LNA/mixers, IF amplifiers, linear power amplifiers, quadrature modulators and demodulators, attenuators, buffer amplifiers, and highly integrated receivers and transmitters.

Richardson Electronics **1206**
La Fox, IL

RLC Electronics **1322**
Mt. Kisco, NY

A. Butts, D. Link, D. Borck

Electro-mechanical switches, filters, power dividers, couplers, attenuators and terminations.

Robinson Laboratories **611**
Nashua, NH

Rogers Corporation, Microwave Division **912**
Rogers, CT

B. Cole, R. Jansen, A. Hassell

Microwave circuit materials, including R03000™ and R04000™ series high frequency circuit materials for commercial applications, TMM® temperature stable microwave materials, a combination of ceramic and PTFE, and RT/duroid® microwave laminates for high performance, high reliability, and specialized applications.

Rogers Corporation **925**
Rogers, CT

K. Walker, D. Reed

Microstrop, stripline and multilayer microwave circuits on Teflon based laminates, including recent advancements in circuit fabrications techniques, integration of film resistors and thermoset materials into traditional microwave circuit constructions.

Rosenberger HF, Technik GmbH & Co. **745**
Fridolfing, Germany

Sage Active Microwave **1214**
Hollis, NH

P. Gale, F. Jenkins, D. Duncan

Semiconductor based microwave components and assemblies; custom engineering and manufacturing of mixers, detectors, switches, attenuators, limiters and multifunction packages; and GaAs or PIN based components in surface mount or drop-in configurations using customized integrations.

Sage Laboratories Inc. **1214**
Natick, MA

C. Marguerite, P. Alfano, J. Majewski

Passive microwave and RF components and subsystems operating DC to above 40 GHz; electromechanical products, including switches, phase shifters and rotary joints; passive connectorized products, including power dividers, couplers; hybrids and filters; drop-in components, including wireline and wirepac hybrids and couplers; and custom interface assemblies and subsystems space qualified military and commercial grade.

Salisbury Engineering Inc. **1110**
Salisbury, MD

Samsung Microwave Semiconductor **813**
Milpitas, CA

C. Glines, D. Martell, F. Adames

High performance GaAs FETs and MMICs, featuring highly efficient power, low noise filter and wide-dynamic range performance; MMICs, offering low cost surface mountable plastic package systems solutions designed for mobile and data communication applications, such as cellular wireless LAN and PCs.

Sawtek Inc. **1410**
Orlando, FL

M. Buckley, M . Stevenson, S. Russ, R. Kindell, S. Miller, G. Monetti

10 MHz to 3 GHz bandpass filters, delay lines, low loss filters, oscillators, pulse expanders and compressors, resonators and SAW-based subsystems for both low volume and high volume programs in communications, cellular telephony, modems, wireless data transmission, radar, electronic warfare, cable television, security systems and other signal processing applications.

Schleifring GmbH **1405**

Scientific Microwave Corp. **1210**
Mississauga, Ontario, Canada

A. Saad, M. Saad

Passive microwave and mm-wave components, including filters, diplexers, circulators, hybrids, couplers, transitions and terminations for military, space and commercial applications; evanescent-mode ridge waveguide and planar structures; and custom production and consulting services.

Sciteq Electronics **1009**
San Diego, CA

Semiconductor Packaging Materials/Polese **433**
Mamaroneck, NY

D. Bankosz, K. Huth, L. Cecil, G. Kiselica, W. Conway, F. Polese, G. Raker, W. Libby

Aluminum and gold bonding wire and ribbon, bond pads packaged on tape, preforms, heat sinks and special solder connectors that are ISO 9002 certified; and EDM parts, seal frames and copper-tungsten heat sinks designed to meet all thermal and expansion requirements.

SGS-Thomson Microelectronics Inc. **819**
Montomeryville, PA

G. Remetei

Silicon RF and microwave power transistors (2 MHz to 4 GHz), hybrid RF power modules for 800/900 MHz digital and analog radio, 915 MHz ISM and 1.6 GHz SATCOM applications; new 20 GHz FT HBS2 technology useful in GSM class 4 power modules, 1.8/1.9 GHz DCS/DECT/PCN integrated front ends and other high speed digital circuits for communication systems including fiber optics.

Sherritt Inc. **1447**
Fort Saskatchewan, Canada

Sigma Systems Corp. **432**
San Diego, CA

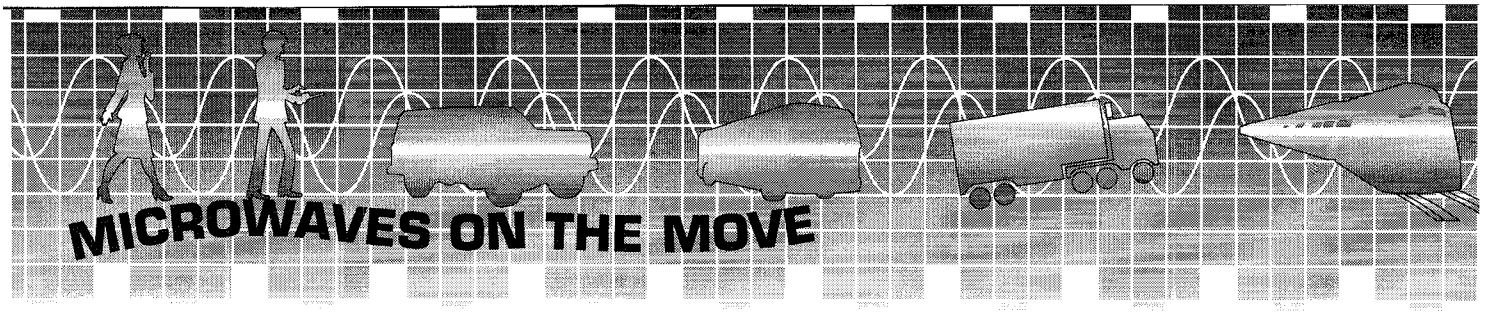
Solitra **510**
Kempele, Finland

Solitron/Vector Microwave Products **1321**
West Palm Beach, FL

Sonnett Software Incorporated **727**
Liverpool, NY

J. Rautio, S. Carpenter, K. Schroeder

Microwave electromagnetic software for 3-D planar multilayer circuits, MMICs, PCBs, and radiating structures that eliminates the fabricate phase of the design-fabricate-measure cycle for 3-D planar circuits, MMICs, and antennas, replacing it with a precise electromagnetic computer-generated analysis.



Southwest Microwave Inc. **545**
Tempe, AZ

J. Rawlins, J. Kubota

Connectors for microwave applications, including 2.92 mm, 3.5 mm, 7 mm, SMA, SSMA, TNC, N, SC, TK and BMA types.

Specialty Connector Co.
Nashua, NH

Spectrum Control Inc. **906**
Erie, PA

T. Krahling

EMI filters, including bushing and solder mount filters, filtered connectors, networks, filter plates capacitors, and custom EMI products, ranging from low cost commercial to full mil spec.

Sprague-Goodman Electronics Inc. **706**
Westbury, NY

Trimmer capacitors (air, ceramic, film, glass, mica, quartz, sapphire); microwave tuners; metalized glass inductors and tuners; SMT trimmers and inductors; and RADIOCER® ceramic RF power capacitors.

SSPA Microwave Corporation **809**
Toronto, Ontario, Canada

A. Leung, P. Zboch

Microwave solid-state power amplifiers operating over the frequency range from 1 GHz to 18 GHz , with output power up to 300 W for C-band and up to 80 W for Ku-band.

ST Corporation **442**
Sunnyvale, CA

Storm Products **512**
Chicago, IL

StratEdge Corporation **1144**
San Diego, CA

C. Trondle, T. Going, D. Wein, J. Carter

Standard and custom packaging products for microwave and mm-wave IC achieved by combining metalized ceramics with thermal conductors to allow for affordable high performance solutions to complex single and multichip IC packaging requirements; specialty products, including ceramic filter assemblies, controlled impedance feedthroughs and high speed digital packages; and auxiliary substrate operations, such as metalization, via processing and lamination.

Superconductor Technologies Inc. **533**
Santa Barbara, CA

J. Madden, E. Guillory, S. Durkin

Filters and switched filter assemblies based on high temperature superconductor HTS thin films.

Synergy Microwave Corporation **700**
Paterson, NJ

T. Almeida, W. Becker

Mixers, power dividers, directional and bidirectional couplers, filters, phase shifters, attenuators, 90 degree hybrids, 180 degree hybrids, phase detectors, modulators, quicktest test fixtures, voltage-controlled oscillators and silicon bipolar monolithic amplifiers.

Taconic Advanced Dielectric Division **605**
Petersburgh, NY

B. Smith, J. Daniels, B. Nurmi, M. Moroney

Copper-clad PTFE and woven glass substrates for commercial and military microwave printed circuit boards; and substrates for high volume commercial applications.

TDK Corp. **1401**
Mahwah, NJ

R. Kiernan, A. Olsen, Jr., G. Van Schaick, E. Sherwood, T. Iwata, T. Yanagida, K. Itagaki

Stripline- and ferrite substrate-type microwave devices, circulators and connector-type isolators; waveguide isolators and circulators; and terminations, mixers and combiners.

Tecdia Inc. **643**
Mountain View, CA

N. Aguilar, K. Kubota, A. A'Neals

Single layer parallel plate chip capacitors capable of operating at frequencies up to 40 GHz; designed and manufactured for both thin and thick film hybrid ICs;. BIAS-Ts, DC power supply boards and mini bias HICs.

Technical Research and Manufacturing Inc. (TRM)
Bedford, NH

D. Crocker, T. Tirollo

Application specific integrated modules (ASIM) and components, including beamformers, phase comparators, modulators, mixers, VCOs, power dividers/combiners, 90° and 180° hybrids, couplers, single sideband modulators (SSM), image reject mixers (IRM), and quadraphase modulators and transformers from DC to 26.5 GHz in connectorized, flatpack, surface mount, or drop-in packages.

Technical Systems Associates Inc. **1152**
Orlando, FL

Teledyne Electronics Technologies **600**
Los Angeles, CA

D. German, P. Galletta

Electro-mechanical relays, switches and attenuators (TO-5, Centigrid); solid-state relays, switches, RPCs, and OP amps, power hybrids, bridges, diode packs and converters; fiber-optic 1773; analog, digital, multichip module rapid turnaround; and DLVAs, SDLAs, true log amplifiers, detectors, filters and VCOs.

Test & Measurement World **751**
Newton, MA

Sample issues and free subscription applications.

Texas Instruments **943**
Dallas, TX

Thin Film Concepts Inc. **705**
Elmsford, NY

Thin Film Technology **1235**
Buellton, CA

G. St. Amour

Vacuum coating, substrate patterning and custom tooling and mashing services.

Thomson Components and Tubes Corp. **551**
Totowa, NJ

Times Microwave Systems **419**
Wallingford, CT

R. Krimsier, D. Dubuc, J. Riter

Coaxial cable, RF transmission lines, and T-Flex cable and cable assemblies.

TLC Precision Wafer Technology **350**
Toshiba America Electronic Components **1413**

TRAK Microwave Corp. **919**
Tampa, FL

T. Roberts, D. Killen, J. Reese, J. Krastel, S. Taylor, R. Walsh, W. Anthony, M. McWhorter

Synthesizers and oscillator-related products, specializing in multifunction assemblies; components including oscillators, frequency multipliers, comb generators, filters, isolators and circulators; RF and IF passive signal processing components, including mixers, couplers, splitters, hybrids, I/Q modulators/demodulators, phase shifters, variable attenuators and matching transformers; and time-related products, including GPS time and frequency standards.

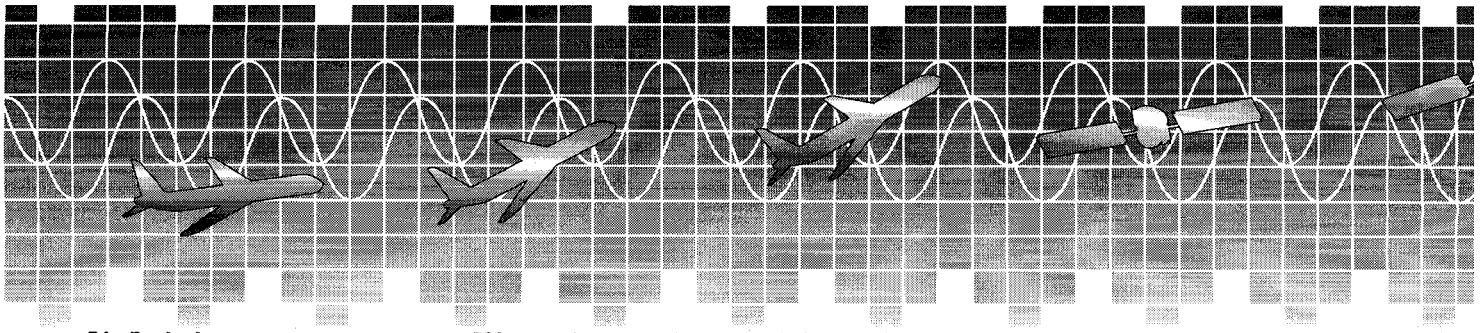
TransTech **732**
Adamstown, MD

Advanced technical ceramics.

Trilithic **420**
Indianapolis, IN

B. Binninger, D. Distler, B. Collins, T. Bever, H. Richards

RF and microwave components, including filters, attenuators, switches and switching/control subsystems.



Trim-Tronics Inc. **522**
Cazenovia, NY

J. Dowd, M. Tronser

Air plate variable and air tubular variable capacitors, sapphire variable capacitors, microwave tuning elements and aluminum RF enclosures.

TriQuint Semiconductor **1227**
Beaverton, OR

R. Christ

Commercialized GaAs for wireless communications productions, including standard products RFICs from 500 MHz to 2.5 GHz and a full-service foundry; models, wafer fab, test, packaging and product engineering services; and four stable processes with capability for digital, analog and RF functions on same chip.

Trontech
Eatontown, NJ

G. Oliver, C. Marchini

RF/microwave amplifiers and amplifier based subsystems serving cellular, PCN, ISM and select military applications, including low noise amplifiers, class A linear power amps, feed forward amps, receiver multicouplers, tower top receivers and repeaters for frequencies ranging from 10 kHz to S-band.

TRU-Connector **526**
Peabody, MA

S. O'Neil

Standard and custom RF coaxial connectors and adapters in LC, LT, EIA, QDL, 7/16, C, HN, N, QDS, SC, Twinax, UHF, BNC, QDM, TNC, SMA and Triax styles.

TRW Inc. **1427**
Redondo Beach, CA

T-Tech Inc. **724**
Atlanta, GA

L. Herbert, K. Stokes

Hardware and software solutions for prototyping circuit boards and related applications using the Quick Circuit Model 7000 milling and drilling machine, which uses the Gerber output from any CAD package to create an isolation mill path and to mill and drill prototype circuit boards quickly and economically.

United Satcom Inc.
Flushing, NY

Universal Circuits **348**
Maple Grove, MN

P. Koosmann, J. Jeffries

Unique products on Teflon, Kapton and FR4 in large sizes and shapes, for medical/imaging and radar ranging from .002" thick materials to multilayer, ensuring quality and on time delivery.

US Microwave Inc. **1312**
Tucson, AZ

UTE Microwave, Inc. **1010**
Asbury Park, NJ

L. Nilson, J. Gruber, S. Lehrfeldt

Microwave ferrite devices VHF to 20 GHz; circulators, isolators, multi-port circulators, high ratio isolators and low and high power devices; coaxial, flange mount drop-ins, and waveguide units for communications, radar, medical and scientific applications; and iso-filters, ISO-adapters, waveguide terminations and custom designs.

Varian Canada,
Quality Hermetic Products **536**
Georgetown, Ontario, Canada

K. Elliott, J. Maffia, J. Gannon

Quality hermetic products, including a wide variety of plugs, connectors, headers, end seals, feedthrus and hybrid packages; and varied and exacting customer design specification capabilities.

Vari-L Co. Inc. **1045**
Denver, CO

Vectron Laboratories Inc. **1007**
Norwalk, CT

R. Stephens, M. Scinto

Crystal and noncrystal-controlled oscillators from 0.1 Hz to beyond 2.2 GHz with sinewave or logic output; XOs, TCVOs, TC/VCXOs, VCOs, OCXOs and sonet clock recovery modules.

VertiCom Inc.
(formerly YRLS Communications Inc.) **647**
Santa Rosa, CA

M. Cheong, M. Lampenfeld

Commercial radio subsystems and components for wireless communications at frequencies of 800 MHz through 38 GHz for SATCOM earth stations, terrestrial radio systems, cellular and personal communications systems; and a wide variety of standard products, as well as custom integrated assemblies.

Voltronics Corp. **1333**
Denville, NJ

Wandel & Goltermann **1123**
Morrisville, NC

A. Thierer, D. Smeraldo, B. Mullen, R. Mattingly, E. Mueller

High performance, portable spectrum analyzers operating over the frequency range from 20 Hz to 26.5 GHz that analyzers can handle a variety of measurements on the very diverse systems used in digital radio and satellite transmission (RF, IF, AF levels), radio broadcasting, television, broadband communications and audio/video work.

Watkins-Johnson Company **1201**
Palo Alto, CA

T. Burkhard, J. Spear, R. Clark

State-of-the-art components and receivers for wireless telecomm.

West-Bond Inc. **1222**
Anaheim, CA

V. Bezjian

Manual, semi-automatic, automatic and insulated wire bonders; manual die bonders; and manual and automatic wire bond pull testers.

Wireless Design & Development **1150**
Morris Plains, NJ

V. Peters

A product tabloid reaching 50,000 specifiers in the commercial wireless marketplace with editorial coverage of the newest products in the industry and application articles written by the experts in the field of RF & microwave technology.

W.L. Gore **1200**
Flagstaff, AZ

XL Microwave Inc. **528**
Oakland, CA

W. Artz, R. Swift, D. Thornton

Microwave and mm-wave CW frequency counters and source locking counters to 50 GHz, including power measurement, GPIB, DC operation and a two year warranty; sweeping current supply with 0 to 2 amp output or +1 amp output, GPIB; and Gunn oscillator and YIG oscillator phase lock modules.

ZAX Millimeter Wave Corp. **532**
San Dimas, CA

Zeland Software **425**
San Francisco, CA